of Southport. With reference to the latter, Mr. Baxendell remarks that, owing to the sea breezes, all the summer months are cool by day; generally speaking, there is more sunshine in the afternoon than in the morning. July is the best month of the year for outdoor life; May and June, and even September, are more settled than August. The report includes, as usual, a very handy table of comparative climatological statistics at health resorts and large towns, compiled from Meteorological Office data.

IN the Bulletin of the Calcutta Mathematical Society, vol. ii., part 1 (Calcutta University Press, 1914), a paper is published by Mr. Jibon M. Bose, on the equations of motion of a plane kite, with special reference to its equilibrium, small oscillations, and conditions of stability. The paper thus constitutes a solution of Problem 16 of Bryan's "Stability in Aviation" (p. 180). In the case in which the kite is a plane lamina without keels, the author, as might be expected, obtains cubic equations for the longitudinal and lateral stability. This result is in accordance with the corresponding results for an aeroplane in which certain roots of the biquadratics vanish unless the aeroplane is provided with auxiliary surfaces.

THE *Morning Post's* "own correspondent" in Rome announces that Prof. Argentieri, of Aquila (there is no university in Aquila, and we do not find Prof. Argentieri's name in "Minerva"), has invented a "pocket" system of radio-telegraphy, in which apparatus costing twelve shillings is capable of intercepting messages from the Eiffel Tower, a distance of 730 miles, that the German Government has offered him a large sum of money for the system, and that he has patriotically refused it, preferring to place his invention at the service of his own Government. It is true that the aerial for receiving messages of high power need not necessarily be of great length, that a great deal of wire can be coiled up in the pocket and erected on light portable posts to a considerable height, and it is also true that the remaining apparatus, for receiving only, may be of small bulk, but one can well be sceptical as to the authenticity of such a statement as the above. Perhaps the time will come when a man may slip a telephone receiver over his head, put up an aluminium-framed umbrella, stand with his feet in a puddle, and, using a battery, induction coil, and a sending key disposed in various pockets, and a detector in his hat, communicate freely with friends a few hundred miles away. But we have not reached this point yet, and, at present prices, the aluminium umbrella alone would probably cost twelve shillings. We are willing to give Mr. Argentieri the full credit his invention deserves so soon as he has found an opportunity to explain its details or to demonstrate its capabilities, but, in the meantime, we cannot take seriously the description given in our contemporary.

THE following forthcoming books are additional to those announced in our issue of last week:—In *Anthropology and Archaeology*: The Literature of the Ancient Egyptians, Dr. E. A. Wallis Budge; A History of the Egyptian People, Dr. E. A. Wallis Budge (J. M. Dent and Sons, Ltd.); Ægean Archæology, H. R. Hall (The Medici Society, Ltd.); A Hausa Phrase Book, with Medical and Scientific Vocabularies, A. C. Parsons; Contributions to the Ethnology of the Salish Tribes, J. A. Teit; Coos Texts, L. J. Frachtenberg (Oxford University Press). In *Geography and Travel*: Life and Death in the Antarctic, Sir D. Mawson, two vols., illustrated (W. Heinemann); Indo-China and its Primitive People, Capt. H. Baudesson, illustrated; The Roman Colonies of North Africa, and their Ruined Cities, R. Sturzenbecker, illustrated (Hutchinson and Co.); Geography of Eastern Asia, D. Paton (Oxford University Press); On the Trail of the Opium Poppy, Sir A. Hosie, two vols., illustrated (G. Philip and Son, Ltd.); Travels in the Middle East, Lieut. T. C. Fowle, illustrated; The Voyages of Capt. Scott, retold by C. Turley, illustrated (Smith, Elder and Co.). In *Mathematics and Physical Science*: Electric Waves, Prof. G. W. Pierce; The Emission of Electricity from Hot Bodies, Prof. O. W. Richardson; Colloidal Solutions, Prof. E. F. Burton; Atmospheric Ionization, Prof. J. C. McLennan (each in the series of Monographs on Physics), (Longmans and Co.); Elementary Principles in Statistical Mechanics, Prof. J. Willard Gibbs (Oxford University Press). In *Medical Science*: The Evolution of Modern Medicine, Sir W. Osler (Oxford University Press). In *Metallurgy*: Zinc, Dr. J. S. G. Primrose; Aluminium, Dr. R. Seligmann; Metallurgy of Strain, S. C. W. Humfrey; Brass, G. D. Bengough; Refractory Metals, W. C. Hancock (Constable and Co., Ltd.). In *Technology*: Electrical Installation Manuals on Conductors, House Wiring, etc.; Lamps, Switches, Fittings, Transformers; Bells, Telephones, etc.; Testing and Localizing Faults (Constable and Co., Ltd.); Architectural Acoustics, W. C. Sabine (Oxford University Press).

A NEW and cheaper edition of the late Dr. Alfred Russel Wallace's book, "The World of Life: a Manifestation of Creative Power, Directive Mind, and Ultimate Purpose," has been published by Messrs. Chapman and Hall, Ltd. In its original form the work was reviewed at length in our issue for June 8, 1911 (vol. lxxxvi., p. 481), and it will be sufficient here to say that it can now be obtained at the price of 6*s.* net.

OUR ASTRONOMICAL COLUMN.

COMET 1913*f* (DELAVAN).—M. P. Puiseux communicates to the *Comptes rendus* for September 28 (vol. clix., No. 13) an account of photographs of Delavan's comet (1913*f*) which have been obtained at the Paris Observatory with the Henry-Gautier equatorial on September 5 and 6. The plates are impressed with a réseau, and each shows at least six stars which figure in the catalogues of the Astronomische Gesellschaft, executed at Bonn and Cambridge, together with a large number of fainter stars. Thus the necessary data are available for the determination of two accurate positions of this object. The comet on these dates was a little fainter than a 3·3 magnitude star. M. Coggia, in the same number of the *Comptes rendus*, gives five observations of positions of this comet made between September 14 and 18. On these dates the comet presented a round nucleus of about magnitude 5 with a tail of about 1° in length.

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A CENTRAL BUREAU FOR TRANSMISSION OF ASTRONOMICAL NEWS.—At the present time astronomers have no available organisation by which the news of important astronomical discoveries can be quickly distributed to the leading observatories of the world, nor is there a bureau with which anyone making an important discovery can immediately communicate with the knowledge that the news will at once be circulated world wide. This condition of affairs is due to the fact that the recognised Central Bureau is at Kiel, in Germany, and that the state of war prevents the circulation of any such news. No steps, so far as is known, are being taken to remedy this defect, and for this reason the attention of astronomers should be directed to the necessity of some definite action to correct this unsatisfactory state of affairs. There is little doubt that if the Royal Astronomical Society of Great Britain would undertake, even if only as a temporary measure, the task of receiving and disseminating astronomical information, this act would meet with the approval of astronomers all the world over. Perhaps the council of this society might be persuaded to consider this suggestion at their next meeting. In the meantime a useful purpose might be served if astronomers at home and abroad stated their views on the subject so that proper steps can be taken for the formation of a permanent astronomical bureau.

THE SIDEREAL CENTRE OF THE UNIVERSE.—That brilliant star, Canopus, or α Argus, more familiar to those who live in southern latitudes, has been brought into prominence by the interesting communication made to *Knowledge* in the August issue. In discussing the positions in space of the helium, or B stars, which stars, whether faint or bright, are situated at vast distances from us, and are free from preferential motion or star streaming, Mr. O. R. Walkey is led to conclude that peculiar interest becomes attached to the star Canopus in that it occupies the approximate position derived for the centre of the stellar system. In the article in question he gives his reasons for concluding that the distance of this star is of the same order as that indicated for this helium star centre, that Canopus appears to be stationary with reference to these helium stars, that its luminosity and mass are in character with their suggested significance, that the relative motions of the faint stars in the vicinity of Canopus indicate an orbital motion confirming the independently derived mass, and finally that the component of the solar motion tangential to Canopus indicates the existence of such a mass at the given distance. While the author makes it clearly understood that the views set forth do not prove the central position of Canopus, yet he shows that the evidence brought forward from many points of view all point consistently in the same direction.

THE ITALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE report of the seventh meeting of the Italian Society for the Advancement of Science, which was held in Siena in September, 1913, has been recently issued; it contains a full account of the meeting and of the papers read before the society. The report contains pp. lviii + 1091, and is a striking testimony to the rapid development of the society, which is now only in its seventh year of existence, the first meeting having been held at Parma in 1907. The work of the society is divided broadly into three classes, Class A being devoted to the physical and mathematical sciences, with five sections—astronomy and mathematics; physics and applied mechanics, including electrotechnics; chemistry; mineralogy and geology; and geography. Class B includes the biological sciences, and is divided into four sections, dealing respectively with anatomy and zoology; botany and agriculture; physiology; pathology and hygiene. Class C comprises the moral sciences, and is subdivided into eight sections—archæology and the history of art; the history of science; philology; economic and social sciences; legal sciences; philosophy; history and the history of religion.

The meeting was opened by Prof. Pietro Rossi, the rector of the University of Siena, the inaugural address being delivered by Prof. Antonio Garbasso, who chose as his subject "The Principles of Mechanics." General addresses were delivered by Prof. G. Pighini on nervous energy and the chemico-physics of protoplasm; by Colonel E. Caviglia on the work executed in Libya by the Institute of Military Geography; and by Prof. A. Sclavo on the laws of hygiene. Prof. E. Manasse gave an address on the mineral resources of the Sienese territory, Prof. Valenti on the conditions and problems of the colony of Erythrea, Prof. F. Ferrara on the Mahometan law in the districts of Tripoli and Cyrene, and Prof. Rossi on the character of Sienese art from medieval times to the renaissance.

Among the sectional addresses the following may be mentioned:—Prof. S. Lussana on the thermodynamics of gases and liquids in reference to practical applications; Prof. A. Pochettino, fluorescence and phosphorescence; Prof. C. Acqua, the liberation of energy in the respiratory processes of plants; Prof. R. Pirotta, the alternation of generations in lower plants; Dr. M. Almagià, our present knowledge of malignant tumours; Prof. E. Centanni, new studies of the "formative stimulus"; Prof. E. Ficalbi, on F. C. Marmocchi, a pre-Darwinian evolutionist, and his views; Prof. C. Ulpiani, applications of thermodynamics to biology; Prof. D. Barduzzi, the Galilean method in the medical sciences; Prof. B. Varisco, science and the theory of science; Prof. R. Pettazzoni, the origin of the idea of God; Prof. C. Parvopassu; recent progress in the science and technics of construction; Prof. P. Gucci, the ideas of Galileo on the divisibility of matter; Prof. E. Carusi, the relation between Roman law and Mahometan law; Prof. C. De Stefani, recent American theories in geology.

Of the numerous papers read before the different sections and printed in full in the report it is possible here only to give the titles of a few which possess some general interest. In Class A, Prof. T. Levi Civita read a paper on the Torricellian theorem; Prof. G. Testa on a modification of Atwood's machine; Prof. M. Panetti on testing light motors at the aeronautical laboratory of the Turin Polytechnic; Captain G. Costanzi on aerodynamic and hydrodynamic tests in connection with aeroplanes; G. Ivaldi on the true kinetic theory of gases. Prof. M. Berti and Dr. S. Ciocchetti, a new type of phototropic substances; Profs. L. Francesconi and N. Granata, the constitution of the cyclic ketones of oil of santolin.

In Class B, Prof. R. Perotti, a general scheme for the utilisation of town sewage; Prof. R. Bargagli-Petrucci, the biological origin of the soil of Siena; Prof. G. Pollacci, on the bioreaction of tellurium and its application to the study of physiology and vegetable pathology; Prof. B. Bocci, the cerebral nerve-cell and its specific work; Prof. L. Sabbattani, colloidal carbon; Prof. A. Constantino, experiments on amino-acids; Prof. F. Nassetti, comparative study of plant and animal tumours; Prof. V. Sebastiani, influence of diet on tumours.

In Class C (moral sciences) only a few of the numerous papers read can be referred to. Prof. E. Fornasari di Verce dealt with the relation between

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